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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|--------------------------|------------------|
| 10/761,264 | 01/22/2004 | Masaaki Sobe | 8001-1019-1 | 2580 |
| 466 | 7590 | 11/02/2004 | EXAMINER NGUYEN, TU T | |
| YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202 | | | ART UNIT 2877 | PAPER NUMBER |

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------|--------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/761,264 | SOBE ET AL. | |
| | Examiner | Art Unit | |
| | Tu T. Nguyen | 2877 | |

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/107,392.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

Drawings

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

Specification, page 1, line 5, the phrase "now U.S Patent No. 6,738,132" should be inserted after "2002".

Claim Objections

Claims 1-20 are objected to because of the following informalities:

1) Claim 1, line 11; Claim 2, line 3; Claim 5, line 3, Claim 6, line 11; Claim 7, line 3, "the second power" should be changed to "the second power of the excitation light".

2) Claim 3, line 3; Claim 4, line 12; Claim 8, line 3, "the first power" should be changed to "the first power of the excitation light".

3) Claims 9-20, refer to discussion in elements 1 and 2 above.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1) Claim 1, line 8, "an excitation light" is not clear. It is not clear whether the "excitation light" in line 8 is the same as the one in lines 3-7. "an excitation light" should be changed to "the excitation light" if they are the same. For the examining purpose, examiner assumes that the excitation light disclosed in line 8 is the same with the one in lines 3-7.

2) Claim 1, line 9; Claim 4, line 6; Claim 6, line 9, "the wavelength of which" is not clear and lacks of antecedent and basis. Does applicant mean "wavelength of the excitation light"?

3) Claim 4, line 13, "a power of the excitation light" is not clear. It is not clear Applicant refer to a first or a second power.

4) Claims 9,11,14,16,19, refer to discussion in element 2 above.

5) Claim 9, lines 14-15, "the first outputting circuit" and "the second outputting circuit" lack of antecedent and basis.

6) Claim 14, line 15, "amplifies inputted a WDM signal" is not clear. Does Applicant mean "amplifies a WDM signal inputted"?

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Claims 2-3,5,7-8,10,12-13,15,17-18,20 are rejected as being depended on a rejected claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (fig 2) (AAPA hereinafter) in view of Ghera et al (6,433,922).

With respect to claims 1,6,11,16, AAPA discloses a system for amplifying WDM signal. The system comprises: measuring means 130 (fig 2) for measuring the power of a backscattered light, coming from an optical fiber 112 (fig 2), arising from a power of an excitation light 140 (fig 2); an output means (inherent because AAPA would have to have an output means in order to transmit the excitation light to the fiber) for outputting the excitation light 140 (fig 2) to the fiber; a WDM means 114 (fig 2).

AAPA does not disclose measuring backscattered lights of first and second powers of the excitation light. Ghera disclose a system for amplifying WDM signal. The system comprises: measuring backscattered lights of an excitation light at one or more power levels (column 6, lines 30-33). Further, Ghera discloses controlling the power levels of the excitation light (column 6, lines 45-47). It would have been obvious to modify AAPA with Ghera by measuring backscattered light of the excitation light at one

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or more power levels and controlling the power level of the excitation light to facilitate the measuring.

AAPA does not disclose the wavelength of the excitation light as claimed. However, it would have been obvious to use the excitation light having a different wavelength from the wavelength of the first and the second backscattered light to distinguish the output light from the backscattered light which make the measurement easier.

With respect to claims 2,5,7,10,12,15,17,20, it would have been obvious a design choice to control the power of the excitation light as claimed to use the apparatus in different environments.

With respect to claims 3,8,13,18, Ghera discloses measuring backscattered light of an excitation light at one or more pump levels (column 6, lines 30-33). It would have been obvious that the first power level of the excitation light could be chosen to be zero power.

With respect to claims 4,9,14,19, refer to discussion in claim 1 above. Further, AAPA discloses a test light outputting means 120 (fig 2) and a WDM 114 (fig 2) connected to the excitation light 140 (fig 2), the test light 120 (fig 2) and the fiber 112 (fig 2).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T. Nguyen whose telephone number is (571) 272-2424. The examiner can normally be reached on T-F 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley Jr. can be reached on (571) 272-2800 Ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu T. Nguyen
Primary Examiner
Art Unit 2877

10/28/2004